

Comparisons of Job Characteristics

Focus Occupation: **Machinists (51-4041)**

Associated Occupation: **Computer-Controlled Machine Tool Operators, Metal and Plastic (51-4011)**

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge

Similarity of Focus Occupation to Associated Occupation: 95

Focus Occupation: Machinists (51-4041)

Associated Occupation: Computer-Controlled Machine Tool Operators, Metal and Plastic (51-4011)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation
Mechanical	6.8	15.8	18.0	> Current knowledge level is likely sufficient
Mathematics	9.2	10.9	14.2	>> Current knowledge level is likely more than sufficient
Production and Processing	6.0	10.9	12.7	> Current knowledge level is likely sufficient
Computers and Electronics	8.4	8.5	6.7	< Expanded education and/or training may be required
Engineering and Technology	5.7	7.8	10.2	>> Current knowledge level is likely more than sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 87

Focus Occupation: Machinists (51-4041)

Associated Occupation: Computer-Controlled Machine Tool Operators, Metal and Plastic (51-4011)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation
Operation Monitoring	6.6	13.2	12.0	0 Current skill level may be sufficient
Monitoring	9.9	13.0	10.3	< A higher skill level may be required
Quality Control Analysis	5.9	11.8	12.6	0 Current skill level may be sufficient
Operation and Control	5.4	11.1	11.1	0 Current skill level may be sufficient
Troubleshooting	4.5	9.2	10.2	> Skill level is likely sufficient
Equipment Maintenance	3.5	8.2	9.3	> Skill level is likely sufficient
Equipment Selection	3.3	8.0	8.6	0 Current skill level may be sufficient
Repairing	3.4	7.6	8.5	> Skill level is likely sufficient

Programming	2.2	7.2	3.7	<<	Extensive development of skills in this area may be required
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The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities		Similarity of Focus Occupation to Associated Occupation: 83			
Focus Occupation: Machinists (51-4041)					
Associated Occupation: Computer-Controlled Machine Tool Operators, Metal and Plastic (51-4011)					
Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Reaction Time	4.8	13.2	10.1	<<	Extensive improvement in abilities may be required
Auditory Attention	5.9	13.0	8.7	<<	Extensive improvement in abilities may be required
Hearing Sensitivity	5.6	12.6	9.3	<<	Extensive improvement in abilities may be required
Control Precision	6.6	12.2	13.3	0	Current ability level may be sufficient
Selective Attention	8.7	11.6	9.7	<	Some improvement in abilities may be required
Depth Perception	5.3	10.7	8.4	<	Some improvement in abilities may be required
Rate Control	3.8	10.1	8.6	<	Some improvement in abilities may be required
Wrist-Finger Speed	3.2	8.0	7.3	0	Current ability level may be sufficient
Sound Localization	2.2	5.9	6.2	0	Current ability level may be sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common		Similarity of Focus Occupation to Associated Occupation: 93
Focus Occupation: Machinists (51-4041) Associated Occupation: Computer-Controlled Machine Tool Operators, Metal and Plastic (51-4011)		
Work Activities	Exclusivity of Activity	
Adjust production equipment/machinery setup	25	
Confer with engineering, technical or manufacturing personnel	25	
Determine tasks needed to complete machined products	87	
Examine products or work to verify conformance to specifications	15	
Install equipment or attachments on machinery or related structures	48	
Lay out machining, welding or precision assembly projects	63	
Load or unload material or workpiece into machinery	34	
Maintain or repair industrial or related equipment/machinery	39	
Monitor production machinery/equipment operation to detect problems	27	
Move or fit heavy objects	8	

Operate metal or plastic fabricating equipment/machinery	54
Perform safety inspections in manufacturing or industrial setting	33
Program computer numerical controlled machines	89
Read blueprints	10
Read specifications	23
Read technical drawings	7
Set up and operate variety of machine tools	62
Set up computer numerical control machines	69
Set up production equipment or machinery	51
Understand machine setup instructions	74
Understand technical operating, service or repair manuals	6
Use hand or power tools	2
Use precision measuring tools or equipment	17

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus
Occupation to Associated
Occupation: 92

Focus Occupation: Machinists (51-4041)

Associated Occupation: Computer-Controlled Machine Tool Operators, Metal and Plastic (51-4011)

Tools and Technologies	Exclusivity
Business function specific software	1
Computer printers	2
Computers	1
Content authoring and editing software	1
Face and head protection	7
Holding and clamping tools	3
Industry specific software	1
Length and thickness and distance measuring instruments	2
Machine tools	7
Machinery for working wood and stone and ceramic and the like	12
Marking tools	11
Metal bending and forming machinery	17
Metal working machinery attachments	35
Power tools	2
Rough and finishing tools	5
Soldering and brazing and welding machinery and supplies	6
Special tooling fixtures	16
Vision protection and accessories	3

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.